



Case Study: Terrestrial TV

Enabling 49 additional Digital TV channels in PNG via a new DVB-T2 Transmitter

TECHTEL

Techtel enables PNG's largest TV Service Provider to deliver 48 additional Digital TV channels via a new DVB-T2 Transmitter

Egatel's Medium power VHF TV Transmitters

The medium power transmitters of TVH4000 series incorporate power amplifiers based on LDMOS transistors technology characterized by high power density, allowing very high efficiency. They provide excellent values on key parameters of the transmitted signal quality, such as shoulder attenuation and MER.

They integrate a modulator that covers the main Digital TV and Radio systems, equipped with the latest technology in signal processing allowing Digital TV and Radio signal broadcasting with the highest quality and reliability.

The rapid and easy startup of the transmitter and the power of the Web Server ensures fast commissioning and easy operation. The different options for redundancy and optimal design of critical modules guarantee continuity of service throughout the life of the transmitter.



BACKGROUND

Since PNG's capital and economic hub Port Moresby transitioned from analogue to digital TV in 2014, home access to TV has been on the rise with residents demanding a larger variety of channels. The transition started with Digicel PNG, the country's dominant telecommunications company launching the first multichannel TV network in Port Moresby in 2014 by providing high-definition content through its extensive mobile-tower network.

Today, Digicel's Digital TV service, Digital Play is delivered via both DTH and DTT networks and consists of 92 local and international channels.

With a population over 360,000 and area of 240km², Port Moresby's communities to be served are relatively compact. The local mountainous terrain limits wider coverage so the terrestrial network in Port Moresby requires fewer transmitters each with carefully focused coverage.

CUSTOMER NEEDS

The ever increasing range of available content, an increase of viewers in the region and consequent demand for more immersive content experiences saw Digicel enlist a leader in media technology solutions, MediaKind to enhance its current system. The upgrade would provide an additional 48 SD MPEG4 channels through deploying an award-winning compression headend technology and expanded transmitter infrastructure.

To support the largest number of users, MediaKind selected Techtel to facilitate the first expansion for the DVB-T2 VHF terrestrial transmitters, at Burn's Peak site in Port Moresby.

SOLUTION

As part of the solution, Techtel provided and integrated Egatel's DVB-T2 Transmitters, which now enable the delivery of more than 48 additional services for Digicel subscribers in Port Moresby, over two newly added transport streams.

The Egatel DVB-T2 system itself incorporates power amplifiers based on LDMOS transistors technology characterized by high power density, allowing very high efficiency. Furthermore, Egatel integrate a modulator that covers the main TV and Radio spectrums, equipped with the latest technology in signal processing allowing Digital TV broadcasting with the highest quality and reliability. The integrated transmitter is compatible with both single frequency (SFN) and multiple frequency (MFN) networks, a result of Egatel's system's configuration flexibility.

In addition, the new DVB-T2 system features integrated digital adaptive pre-correction for easy commissioning and testing requirements with flexible configurations accommodating various redundancy scenarios.

As a part of its integrated offering, Techtel supplied, installed, commissioned and tested a new 600Wrms (2+1) DVB-T2 transmitter system by Egatel, as well as seamless integration of the platform into Port Moresby's existing transmission facilities by adding a new RF combiner with two narrow-band and one wide-band inputs. The combiner and its internal filters have been custom designed and fine-tuned to accommodate the four adjacent RF channels compliant with PNG RF spectrum allocations for broadcasting of DTV services.

RESULTS

After comprehensive testing, Techtel's integration team were able to achieve exceptional RF signal and sharp filter performance with shoulder value measured at over 49dB, and MER value of higher than 35dB, which translates into superior signal quality for the viewers, with minimal interference.

Together with the installation of MediaKind's technology, Techtel's integrated transmitter has empowered Digicel to open up new revenue streams by delivering 48 more channels, bringing the company's total broadcast channels to 92 in Port Moresby alone. Since the start of the project, Digicel PNG has already launched 4 new TV plans including a 60 channel bundle on the Digicel TV terrestrial service in and around Port Moresby.

The new channel line-up includes FOX, HBO, Cartoon Network, Fox Sports, MTV, Discovery as well as Digicel TV's exclusive coverage of the Hunters, NRL, English Premier League soccer, Super Rugby and more.


Techtel is an established provider of digital TV broadcasting transmitters with many other channels powered by Egatel in service in the Australian market.

TECHTEL

We believe that to be successful, we need to be unique. Our business thrives in a competitive market because of our ongoing efforts to make our business different.

To be unique, our company is focused on the future and being ahead of the next trends. Understanding our customers intimately allows us to spot the solutions that will relieve pressure and enable our customers to embrace new ways of thinking that changes their approach to media delivery.

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